

Classification of the Leafbeetles from Korea
Part II. Subfamily Cassidinae (Coleoptera: Chrysomelidae)

Seung Lak AN*, Yong Jung KWON* and Seung-Mo LEE**

*Department of Agricultural Biology, College of Agriculture,
Kyungpook National University, Taegu 635, Korea.

**The Division of Entomology, National Science Museum, Seoul 110, Korea.

ABSTRACT

The present paper deals with 23 species belonging to 4 genera of the Cassidinae from Korea, of them 4 species are newly added here as: *Cassida (Taiwania) juglans* Gressitt, 1942, *C. (T.) versicolor* (Boheman, 1855), *C. (Cassidulella) velaris* Weise, 1896 and *C. (C.) vittata* Villers, 1789.

INTRODUCTION

The subfamily Cassidinae or tortoise beetles, are often thought to be the most specialized taxa among the leafbeetles. The adults are broadly oval or circular in shape, with the expanded prothoracic and elytral margins, and the head largely or entirely covered by the pronotum. Some of them are similar to ladybird beetles. The larvae bearing with caudal appendages are elongate-oval, somewhat flattened, and very spiny.

Heyden firstly recorded *Cassida viridis* from Korea in 1887. Since then 19 species of tortoise beetles have been reported in this country, mainly by Spaeth (1914, 1926, 1930), Chujo (1941), Cho (1957, 1965), Gressitt et Kimoto (1963), Takizawa (1980) and others.

The present paper treats of 23 species belonging to 4 genera, among them 4 species are recorded for the first time in Korea. All the reported domestic localities and host plants of each species followed after the authors' the first series.

Subfamily Cassidinae

Key to Korean Genera of Cassidinae

1. Tarsal claws lacking a comb-like structure at base (Cassidini) 2
- Tarsal claws bearing a comb-like structure at base (Aspidomorphini); body rounded in outline, depressed; elytra fairly smooth, with broad, subhorizontal lateral expansion *Aspidomorpha*

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2. Prosternum lacking a groove on side for reception of antennae 3
 - Prosternum with a groove on side for reception of at least basal portion of antennae; tarsal claws not appendiculate basally; antennae with distal 2 or 3 segments extending beyond posterior margin of prothorax; body moderately convex *Glyphocassis*
3. Apical margin of elytra lacking a row of fine hairs on underside; tarsal claws often toothed basally *Cassida*
 - Apical margin of elytra with a row of fine hairs on underside; claws lacking basal teeth or appendices *Thlaspidu*

Tribe Aspidomorphaini 금자라 남생이 앞벌레 족

Genus 1. *Aspidomorpha* Hope, 1840 금자라 남생이 앞벌레 족

Aspidomorpha Hope, 1840, Col. Man. 3: 158.

Type-species: *Cassida miliaris* Fabricius.

Type-locality: Oriental regions.

Key to Korean species of *Aspidomorpha*

- Elytral disc evenly convex and smooth, lacking a postbasal tubercle; yellowish brown, elytral disc reddish brown to pitchy brown, with a dark reddish brown patch on humeri and another on postero-lateral portion; length of body 6-7.2mm *Aspidomorpha transparipennis*
- Elytral disc with a common, subacute tubercle at suture a short distance behind scutellum; yellowish brown, elytral disc dark reddish brown to pitchy brown, explanate margins of elytra with a distinct pitchy patch on humeri and one another on postero-lateral portion; elytra finely punctate-striate without depressions; length of body 7.2-8.2mm *Aspidomorpha difformis*

1. *Aspidomorpha difformis* (Motschulsky, 1860) 금자라 남생이 앞벌레

Deloyala difformis: Motschulsky, 1860, Etud. Ent. 9: 27.

Aspidomorpha difformis: Spaeth, 1914, Zool.-Bot. Ges. Wien, Verh. 64 (Sitzb): 129 (Korea).

Aspidomorpha difformis: ab. *japonica*, Spaeth, 1926, Best.-Tab. Eur. Col. 95:10.

Aspidomorpha difformis: Doi, 1927, Dob. Zassh. 39 (466): 337 (Korea).

Aspidomorpha difformis (sic): For. Exp. Stat. Chos. Gov. Gen., 1932, Out. Koryo Exp. For.: 122^①.

Aspidomorpha difformis: Chûjô, 1934, Sylvia 5: 150-152 (Korea).

Aspidomorpha difformis: Haku, 1936, Journ. Chos. Nat. Hist. Soc. 21: 123^②.

Aspidomorpha difformis: Mochizuki et Tsunekawa, 1937, Journ. Chos. Nat. Hist. Soc. 22: 84^③.

Aspidomorpha difformis: Hirayama, 1940, Col. Ill. Beet.: 166, pl. 51 (Korea).

Aspidomorpha difformis: Yuasa, 1950, Icon. Ins. Jap. ed. ref. 2: 1209, f. 3477 (Korea).

Aspidomorpha difformis: Chûjô, 1951, Trans. Shik. Ent. Soc. 2(3): 46 (Korea).

Aspidomorpha difformis: Chûjô et Kimoto, 1961, Pac. Ins. 3(1): 196 (Korea).

Aspidomorpha difformis: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 949-950 (Korea).

Aspidomorpha difformis: Nakane, 1963, Icon. Ins. Jap. Col. nat. ed. 2: 347, pl. 174(8) (Korea).

Aspidomorpha difformis: Cho, 1965, Sci. Techn. Nat. Sci. 6: 127 (Korea).

Aspidomorpha difformis: Suda, in Furukawa, et al., 1965, Col. Encycl. Ins.: 552 (Korea).

Aspidomorpha difformis: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 644-645 (Korea).

Aspidomorpha difformis: Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 389, pl. 74(26) (Korea).

Aspidomorpha difformis: Jolivet, 1973, Cah. Pac. 17: 274 (Corée).

Aspidomorpha difformis: Ed. Dep. Hokuryukan, 1979, Ill. Ins. Jap. stud. ed.: 438 (Korea).

Locality: published records- Kwangnŭng^①, Mt. P'algongsan^②, Mt. Soyosan^③; new records- Mt. Chuwangsan, Mt. Ch'iaksan, Mt. Ungilsan.

Distribution: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Ryukyu), China (Cheking, Fukien, Kirin, Taiwan), U.S.S.R. (Siberia).

Host: *Calystegia japonica* (Thunberg), *Chenopodium* sp.

2. *Aspidomorpha transparipennis* (Motschulsky, 1860)

모시금자라 남생이알벌레

Coptocycla transparipennis Motschulsky, 1860, Etud. Ent. 9: 41.

Aspidomorpha elliptica Gorham, 1885, Proc. Zool. Soc. Lond.: 280.

Aspidomorpha transparipennis: Spaeth, 1914, Col. Cat. 62: 67 (Korea).

Aspidomorpha transparipennis: Spaeth, 1914, Zoo. -Bot. Ges. Wien, Verh. 64: 129 (Korea).

Aspidomorpha transparipennis: Spaeth, 1926, Best. -Tap. Eur. Col. 95: 10 (Korea).

Aspidomorpha transparipennis: Doi, 1927, Dob. Zassh. 39 (466): 334 ①-②

Aspidomorpha transparipennis: Matsumura, 1931, 6000 ill. Ins. Jap.: 226 (Korea).

Aspidomorpha transparipennis: Chûjô, 1934, Sylvia 5: 150-151 (Korea).

Aspidomorpha transparipennis: Haku, 1936, Chos. Nat. Hist. Soc. (I) 21: 123 ③.

Aspidomorpha transparipennis: Morita, 1936, Ent. World 4(34): 858 ④.

Aspidomorpha transparipennis: Mochizuki et Tsunekawa, 1937, Journ. Chos. Nat. Hist. Soc. 22: 84 ⑤.

Aspidomorpha transparipennis: Mochizuki et Masui, 1939, Sci. Rep. Keit. 4: 651 ⑥.

Aspidomorpha transparipennis: Chujo, 1941, Trans. Nat. Hist. Soc. Form. 31(209): 233 ⑦-⑪

Aspidomorpha transparipennis: Goto, 1956, In Nakane, et al.: Color. Ill. Ins. Jap. Col.: 69, pl. 20 (Korea).

Aspidomorpha transparipennis: Cho, 1957, Hum Sci. Kor. Univ. 2: 248 (Korea).

Aspidomorpha transparipennis (sic.): For. Exp. Stal. Kor., 1959, Handb. Exp. For.: 98 ⑫

Aspidomorpha transparipennis: Chûjô et Kimoto, 1961, Pac. Ins. 3(1): 196 (Korea).

Aspidomorpha transparipennis: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 954 ⑬.

Aspidomorpha transparipennis: Nakane, 1963, Icon. Ins. Jap. Col. nat. ed. 2: 347, pl. 174(9) (Korea).

Aspidomorpha transparipennis: Cho, 1965, Sci. Techn. Nat. Sci. 6: 127 (Korea).

Aspidomorpha transparipennis: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 644 (Korea).

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Aspidomorpha transparipennis: Zool. Soc. Kor., 1968, Nom. An. Kor. 2: 120 (Korea).

Aspidomorpha transparipennis: Cho. 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 404

• (C. Korea).

Aspidomorpha transparipennis: Jolivet, 1973, Cah. Pac. 17: 274-275 (Corée).

Aspidomorpha transparipennis: Kim, 1978, Distr. Atl. Ins. Kor. 2 Col.: 173, pl.18⁽¹⁴⁻²⁵⁾ (CH38)

Aspidomorpha transparipennis: Takizawa, 1980, Nat. & Lif. 10(2): 12⁽¹⁰⁻¹¹⁾

Aspidomorpha transparipennis: Kimoto, 1984, Col. Jap. Col. 4: 221 (Korea).

Aspidomorpha transparipennis: Kim et Nam, 1984, Rep. Acad. Surv. Mt. Sorak.: 333⁽²⁾

Locality: published records- Seoul^(1, 5) (Keizyo⁽⁷⁾, Namsan⁽¹⁶⁾, Södaemun⁽¹⁷⁾, Sinch'on⁽¹⁸⁾, Segömjöng⁽²¹⁾), Sariwon^(2, 21) (Sariin⁽⁸⁾, Sariwön⁽²⁵⁾), Yech'ön^(3, 22), (Reisen⁽³⁾, Gunjan⁽⁴⁾, Mt. Soyösan^(6, 6a), Daikömen⁽¹⁰⁾, Sekirison⁽¹¹⁾, Kwangnüng^(12, 13), Yongmun San⁽¹⁴⁾, Haeju⁽¹⁵⁾, Wangbangsan⁽¹⁹⁾, Koyanggun⁽²⁰⁾, Ch'onmasan⁽²³⁾, Pulguksa⁽²⁴⁾, Hibangsa⁽²⁴⁾, Tökhökkundo⁽²⁶⁾, Soyosan⁽²⁷⁾, Yech'ön⁽²⁸⁾, Kunsan⁽²⁹⁾, Palkong-san⁽³⁰⁾, Dongmeong⁽³¹⁾, Mt. Sörak⁽³²⁾; new records- Mt. Chuwangsan, Taegu, Tansan Myön, Mt. Kumsan.

Distribution: Korea, Japan (Hokkaido, Honshu, Kyushu), China (Kirin), U.S.S.R. (Siberia).

Host.: *Calonyction*, *Calystegia japonica* (Thunberg), *Chenopodium*, *Convolvulus*, *Ipomoea batatas* Lamarck.

Tribe Cassidini

Genus 2. *Thlaspidia* Weise, 1899

큰납생이 앞범레속

Thlaspidia Weise, 1899, Arch. Nat. 65(1): 272.

Type-species: *Coptyocycla cribrrosa* Boheman.

Type-locality: India, SE Asia.

Key to Korean species of *Thlaspidia*

Explanate margin of elytra marked with dark spots both near humeri and behind middle; pronotal disc very feebly convex anteriorly; explanate margin at apex distinctly less than ½ as wide as greatest width at side; disc of dorsal surface reddish brown, together with basal and latero-apical marking on elytral explanate margin, explanate margin and legs yellowish brown, ventral surface black; length 5.2-6.8mm *Thlaspidia lewisii*

Explanate margin of elytra marked with a dark spot only behind middle; pronotal disc not depressed anteriorly; explanate margin at apex about ½ as wide as greatest width at side; lateral angle of pronotum placed very distinctly anterior to median transverse line; elytral border with a distinct obtuse angle postero-laterally, nearly parallel in central portion; ventral surface black, pale along lateral borders; length 7.8-8.5mm *Thlaspidia cribrrosa*

3. *Thlaspidia cribrrosa* (Boheman, 1855)

큰납생이 앞범레

- Coptocycla cribrata* Boheman, 1855, Mon. Cass. 3: 404.
Thlaspidia japonica: Chûjô, 1941, Trans. Nat. Hist. Soc. Form. 31(209): 236^①, ②.
Thlaspidia biramosa japonica: Gotô, 1956, In Nakane, et al.: Color. Ill. Ins. Jap. Col.: 69, pl. 20 (Korea).
Thlaspidia japonica: Cho, 1957, Hum. Sci., Nat. Sci. Kor. Univ. 2: 249 (Korea).
Thlaspidia biramosa japonica: Chûjô et Kimoto, 1961, Pac. Ins. 3(1): 201 (Korea).
Thlaspidia biramosa japonica: Gressitt et Kimoto, 1963, Pac. Ins. Mon 1B: 958-959^③.
Thlaspidia biramosa: Nakane, 1963, Icon. Ins. Jap. Col. nat. ed. 2: 348, pl. 174(21) (Korea).
Thlaspidia biramosa japonica: Cho, 1965, Sci. Tech. Nat. Sci. 6: 128 (Korea).
Thlaspidia biramosa japonica: Suda, 1965, In Furukawa, et al., 1965, Col. Encycl. Ins.: 552 (Korea).
Thlaspidia biramosa japonica: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 647 (Korea).
Thlaspidia kaponica (sic): Zool. Soc. Kor., 1968, Nom. An. Kor. 2: 120 (Korea).
Thlaspidia biramosa japonica: Cho, 1969, Ill. Encycl. Faun. & Flor. 10: 389, pl. 74(27) (Korea).
Thlaspidia kaponica (sic): Hyun et Woo, 1969, Bull. Seoul Nat. Univ. For 6: 189^④.
Thlaspidia biramosa japonica: Ko, 1969, List For Insects Pests Kor.: 234 (Korea).
Thlaspidia biramosa japonica: Kor. Soc. Pl. Prot., 1972, List pl. dis., Ins. Pests & Weeds Kor.: 188 (Korea).
Thlaspidia biramosa japonica: Jolivet, 1973, Cah. Pac. 17: 275 (Corée).
Thlaspidia biramosa japonica (sic): Kim et Kim, 1973, Rep. Kor. Ass. Cons. Nat. 5: 81^⑤.
Thlaspidia biramosa: Kim et Kim, 1974, Ibid. 8: 112^{⑥-⑦}.
Thlaspidia biramosa japonica: Kim, 1978, Distr. Atl. Ins. Kor. 2: 172, pl. 18 (CH37)^{⑧-⑨}.
Thlaspidia biramosa: Kim et Lee, 1980, Rep. Kor. Ass. Cons. Nat. 16: 83^⑩.
Thlaspidia cribrata: Takizawa, 1980, Nat. & Lif. 10(2): 12^⑪.
Thlaspidia biramosa: Yoon et Nam, 1980a, Rep. Kor. Ass. Cons. Nat. 17: 147^⑫.
Thlaspidia biramosa japonica: Yoon et Nam, 1980b, Bas. Plan. Constr. Nat. Stud. Kyongg. Prov.: 39^⑬.
Thlaspidia cribrata: Kimoto, 1984, Col. Jap. Col. 4: 222, pl. 43(24) (Korea).

Locality: published records- Kwangnŭng^⑭ (Koryo^①), Mt. Soyosan^⑮ (Soyô-Zan^②), Mt. Yongmunsan^⑯ (Yong-mun San^③), Mt. Jiri^④ (Chirisan P'iagol^④), Gucheon-dong^⑤ (Muju kuch'ondong^⑤), Mt. Naejang^⑥, Mt. Baekyang^⑦, Huch'ang^⑧, Mt. Ch'ônmasan^⑨, Seoul Uidong^⑩, Mt. Tobongsan^⑪, Mt. Wangbangsan^⑫, Mt. Myöngjisan (Mt. Myeongji^⑬), Taesongni^⑭, Mt. Aengmubong^⑮ (Pogwangsa^⑯), Ch'öngp'yöng^⑰, Mt. Kyeryongsan^⑱ (Kapsa^⑲), Mt. Greryong^⑳, Chibal-do^㉑, Palkong-san^㉒; new records-Mt. Töksungsan, Mt. Chuwangsan, Mt. Naeyönsan, Mt. Pukhansan, Mt. Kajisan, Samnam Myöŋ, Mt. Wönhoyosan, Mt. Yöngch'wisan, Is. Namhaedo, Mt. Obongsan, Mt. Mayisan.

Distribution: Korea, Japan (Ryukyu), China (Hainan, Taiwan), Indo-China, Burma, India.

Host: *Callicarpa japonica* Thunberg, *C. mollis* S. & Z.

4. *Thlaspidia lewisii* (Baly, 1874)

무이스 큰납생이 잎벌레

Coptocycla Lewisii Baly, 1874, Trans. Ent. Soc. Lond.: 214.

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- Coptocycla testacea* Rybakow, 1884, Hor. Soc. Ent. Ross. 18: 136.
Thlaspidia Lewisi (sic): Spaeth, 1914, Junk. Schenk. Col. Cat. 62: 128.
Thlaspidia Lewisi (sic): Spaeth, 1914, Zool-Bot. Ges. Wien. Verh. 64 (Sitzb): 145 (Korea).
Thlaspidia Lewisi (sic): Spaeth, 1926, Best. Tab. Eur. Col. 95: 128 (Korea).
Thlaspidia Lewisi (sic): Doi, 1927, Dob. Zassh. 39: 337 (Korea).
Thlaspidia Lewisi (sic): Chujo, 1934, Sylvia 5: 155-156 (Korea).
Thlaspidia lewisii: Chûjô, 1941, Trans. Nat. Hist. Soc. Form. 31 (209): 236 ^{①-④}.
Thlaspidia Lewisi (sic): Gressitt, 1952, Proc. Calif. Acad. Sci. 4(27): 477, pl. 28(8) (Korea).
Thlaspidia lewisii: Cho, 1957, Hum. Sci., Nat. Sci. Kor. Univ. 2: 249 (Korea).
Thlaspidia Lewisi (sic): Chûjô et Kimoto, 1961, Pac. Ins. 3(1): 202 (Korea).
Thlaspidia lewisii: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 959-960, f. 273(b) (Korea).
Thlaspidia lewisii: Nakane, 1963, Icon. Ins. Jap. Col. nat. ed. 2: 348, pl. 20 (Korea).
Thlaspidia lewisii: Cho, 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 128 (Korea).
Thlaspidia lewisii: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 646 (Korea).
Thlaspidia lewisii: Zool. Soc. Kor., 1968, Nom. An. Kor. 2: 120 (Korea).
Thlaspidia lewisii: Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 389-390, pl. 74(28) (N, C. Korea).
Thlaspidia lewisii: Ko, 1969, List For. Ins. Pests Kor.: 235 (Korea).
Thlaspidia lewisii: Jolivet, 1973, Cah. Pac. 17: 275 (Corée).
Thlaspidia lewisii: Kor. Soc. Pl. Prot., 1972, List Pl. dis., Ins. Pests & weed Kor.: 188 (Korea).
Thlaspidia lewisii (sic): Kim et Kim, 1973, Rep. Kor. Ass. Cons. Nat. 5: 80 ^⑤.
Thlaspidia lewisii: Kim, 1978, Distr. Atl. Ins. Kor. 2: 171, pl. 8 (CH36) ^{⑥-⑬}.
Thlaspidia lewisii: Takizawa, 1980, Nat. & Lif. 10(2): 12 ^⑭.
Thlaspidia lewisii: Yoon et Nam, 1980b, Bas. Plan. Constr. Nat. Stud. Kyongg. Prov.: 39 ^⑮.
Thlaspidia lewisii: Kimoto, 1984, Col. Jap. Col. 4: 222, pl. 43 (23) (Korea).

Locality: published records- Bambutosô ^①, Mt. Kongô-Zan ^②, Zyôgen' an ^③, Mt. Myôko-Zan ^④, Gucheondong ^⑤ (Muju Kuch' ôndong ^⑬), Sambang ^⑥, Kwangnûng ^⑦, Mt. Yongmunsan ^⑧, Mt. Myôngjisan ^{⑨-⑬} Poch' ôn ^⑭, Tongduch' ôn ^⑮, Mt. Wangbangsan ^⑯, Mt. Songnisan ^⑰, Hibangsa ^⑱, Mt. Chirisan ^⑲, Palkongsan ^⑳; new records- Kwaesan, Mt. Chuwangsan, Mt. Ch' ônmasan, Mt. Pukhansan, Mt. Tobongsan, Mt. Kajisan, Mt. Wônhyosan, Mt. Ch'iaksan, Mt. Obongsan, Mt. Odaesan, Mt. Sôlaksan.

Distribution: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tshushima), China (Liaoning, Fukien). U.S.S.R. (Siberia).

Host: *Fraxinus sieboldiana* Blume, *Ligustrum obtusifolium* S. & Z.

Genus 3. *Glyphocassis* Spaeth, 1914.

납생이 앞벌레붙이속

Glyphocassis Spaeth, 1914, Deutsch. Ent. Zeitschr.: 547.

Type-species: *Cassida trilineata* Hope.

Type-locality: N. India.

5. *Glyphocassis spilota spilota* (Gorham, 1885) 남생이 앞벌레붙이

Coptocycla spilota Gorham, 1885, Proc. Zool. Soc. Lond. : 285.

Hebdomecosta reitteri Spaeth, 1915, Wien. Ent. Ztg. 34: 362.

Hebdomecosta spilota: Chûjô, 1942, Trans. Nat. Hist. Soc. Form. 32: 43 (Korea).

Hebdomecosta shirahatai Chujo, 1949, Trans. Kans. Ent. Soc. 14(2): 9, f.1.

Glyphocassis spilota: Chujo et Kimoto, 1961, Pac. Ins. 3(1): 201 (Korea).

Glyphocassis spilota spilota: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 960-961, f. 78(i) (Korea).

Glyphocassis spilota: Nakane, 1963, Icon. Ins. Jap. Col. nat. ed. 2: 347, pl. 174(10) (Korea).

Glyphocassis spilota: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 645 (Korea).

Glyphocassis spilota: Cho, 1969, Ill. Encycl. Faun & Flor. Kor. 10: 404 (Korea).

Glyphocassis spilota: Jolivet, 1973, Cah. Pac. 17: 275 (Corée).

Clyphocassis spilota: Kimoto, 1984, Col. Jap. Col. 4: 221, pl. 43(10) (Korea).

Locality: new record- Mt. Naeyönsan.

Distribution: Korea, Japan (Honshu), China (Chekiang, Fukien, Kiangsu, Shantung), Vietnam (Tonkin),

Genus 4. *Cassida* Linnaeus, 1758

남생이 앞벌레속

Cassida Linnaeus, 1758, Syst. Nat. ed. 10(1): 362.

Type-species: *Cassida nebulosa* Linnaeus.

Type-locality: Europe.

Key to Korean species of *Cassida*

1. Elytral disc generally strongly convex; explanate margin of elytra more than $\frac{1}{2}$ as wide at middle as disc, transparent and unpigmented in central portion; suture often raised into a tubercle behind scutellum; tarsal claws toothed (except in subgenus *Alledoya*) 2
 - Elytral disc rarely strongly convex; explanate margin of elytra generally less than $\frac{1}{2}$ as wide at middle as disc, opaque or feebly transparent, generally pigmented similarly to disc; suture rarely raised into a distinct tubercle behind scutellum; tarsal claws not toothed (toothed in subgenus *Odontionycha*) 6
2. Tarsal claws more or less distinctly toothed; body oval or subrounded in dorsal outline, always rounded posteriorly, generally feebly tuberculate at summit of elytra; elytral disc at most feebly rugose; explanate margin rarely very broadly pigmented at either humeral or posterolateral angles (subgenus *Taiwania*) 3
 - Tarsal claws not toothed; body pentagonal in outline, very strongly tuberculate at summit of elytra; elytral disc coarsely rugose; explanate margin heavily and broadly pigmented at humeral and posterolateral angles (subgenus *Alledoya*); underside black, head and antennae yellowish brown to reddish brown with basal part of femora black; length 4.7-6.7mm *Cassida vespertina*
3. Explanate margin of elytra with a dark humeral area or dark basal margin 4
 - Explanate margin of elytra lacking a humeral dark spot 5

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4. Explanate margin of elytra lacking a posterolateral dark spot; disc of elytra dark reddish brown *Cassida sigillata*
 —. Explanate margin of elytra with a posterolateral dark spot; disc of elytra with irregular spots, particularly at sides *Cassida amurensis*
5. Pronotum narrowed and angulate at side, not broadly rounded; elytra with a raised X-shaped area astride suture at summit; elytral explanate margin often with a dark band at posterolateral portion; underside and legs yellowish brown; length 5.3-6.2mm *Cassida versicolor*
 —. Pronotum broadly rounded at each side; elytra raised crescent on side of summit; elytral explanate margin always absent a dark; underside black with abdomen bordered with pale but legs yellowish brown *Cassida juglans*
6. Tarsal claws not toothed basally 7
 —. Tarsal claws toothed basally; body broad and flat (*Odontionycha*); dorsal body outline ovate, much broader anteriorly than posteriorly; body about 1/3 as deep as broad; color greenish *Cassida viridis*
7. Tarsal claws strong divergent, not minute, projecting at least slightly beyond end of lobes of tarsal segment 3, not hidden by hairs of latter 8
 —. Tarsal claws narrowly divergent, minute, hidden by hairs of tarsal segment 3; frontoclypeal area with central portion narrowly triangular; elytra regularly seriate-punctate (subgenus *Mionycha*); pronotum impunctate; dorsum yellow, deeper yellow on outer 2 interpunctural areas of elytral disc; length 5.0mm *Cassida concha*
8. Explanate margin of elytra feebly declivitous; body generally broadly oval or oblong and flattened (subgenus *Cassida* s. str.) 9
 —. Explanate margin of elytra steeply declivitous; generally projecting further inferior than ventral surface of body, forming a concavity (subgenus *Cassiduella*) 16
9. Elytra regularly seriate-punctate, without any punctures in central portion between third and fourth puncture rows 10
 —. Elytra irregularly seriate-punctate throughout, at least with some with some extra punctures between third and fourth puncture rows 11
10. Explanate margin of elytra strongly thickened at border in central portion; pronotum broadly rounded at side; dorsum yellowish with minute black speckling; yellowish to reddish brown with ventral surface black; length 6.3-7.2mm *Cassida nebulosa*
 —. Explanate margin of elytra not distinctly thickened at border in central portion; pronotum broadly rounded at middle of each side; dorsum reddish brown in most cases elytra with numerous longitudinal lines and spots of black, and with or without posterolateral black marking; length 5.0-5.5mm *Cassida piperata*
11. Body fully 2/5 as deep as broad; interpunctural area 2 of each elytra strongly raised; pronotum broadly rounded laterally, reddish; elytra reddish or black; length 5.0mm *Cassida pallidicollis*
 —. Body only rarely as much as 1/3 as deep as broad 12
12. Dorsal surface not contrastingly marked in dried specimens, generally reddish yellow or greenish on explanate margin as well as disc 13
 —. Dorsal surface contrastingly marked with distinct discal spots on elytra; dorsum reddish

- with suture and about 6 spots on elytra disc black; ventral surface and legs black or reddish brown; length 5.8-7.8mm *Cassida lineola*
13. Legs not entirely black, though femora sometimes black basally; explanate margin not very sharp-edged 14
 —. Legs completely black; explanate margin sharp-edged; clypeus short, slightly longer than wide, shining, and with rather deep punctures; dorsal surface light reddish brown, sparsely covered with short whitish pubescence; length 5.5-6.2mm
 *Cassida fusciorufa*
14. Interpunctural areas of elytral disc lacking minute hairs 15
 —. Interpunctural areas of elytral disc with minute hairs; form elongateoval; pronotum subsemicircular, closely meeting bases of elytra; explanate margin of elytra less than 1/3 as wide as disc *Cassida mandli*
15. Frontoclypeal area distinctly longer than broad; length 7.0-8.5mm
 *Cassida rubiginosa*
 —. Frontoclypeal area fully as broad as long; length 7.0mm *Cassida spaethi*
16. Frontoclypeus bounded by grooves which meet at antennal insertions or disappear before meeting 17
 —. Frontoclypeus bounded by grooves which unite to form a single median groove before reaching antennal insertions; grooves continuing to vertex; ventral surface black with abdomen bordered pale; femora black; length 3.5-5.5mm *Cassida nobilis*
17. Grooves along sides of frontoclypeus meeting at antennal insertions; legs black with apex of femora, tibiae and tarsi brownish; length 4.8-5.2mm *Cassida velaris*
 —. Grooves along frontoclypeus disappearing before antennal insertions; legs yellowish brown; length 5.0-6.5mm *Cassida vittata*

Subgenus *Alledoya* Hincks, 1950

꼬마 남생이 앞벼레

6. *Cassida (Alledoya) vespertina* (Boheman, 1862)

Coptocycla vespertina Boheman, 1862, Mon. Cass. 4: 357.

Deloyala vespertina: Spaeth, 1926, Best.-Tab. Eur. Col. 95: 61 (Korea).

Cassida (Deloyala) vespertina: Chujo, 1934, Sylvia 5: 167 (Korea).

Cassida (Lasiocassis) vespertina: Gressitt, 1952, Proc. Cal. Acad. Sci. 4(27): 486 (Korea).

Cassida vespertina: Goto, 1956, In Nakane, et al. Color. Ill. Ins. Jap. Col.: 69, pl. 20 (Korea).

Cassida (Alledoya) vespertina: Chujo et Kimoto, 1961, Pac. Ins. 3(1): 196 (Korea).

Cassida vespertina: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 969 (Korea).

Cassida vespertina: Nakane, 1963, Icon. Ins. Jap. Col. nat. ed.: 348, pl. 174(18) (Korea).

Cassida vespertina: Cho, 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 128 (Korea).

Cassida vespertina: Suda, In Furukawa, et al., 1965, Col. Encycl. Ins.: 551 (Korea).

Cassida (Alledoya) vespertina: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 653 (Korea).

Cassida vespertina: Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 390, pl. 29 (Korea).

Cassida (Alledoya) vespertina: Jolivet, 1973, Cah. Pac. 17: 275 (Coree).

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Cassida vespertina: Ed. Hokuryukan, 1979. Ill. Ins. Jap. Stud. ed.: 436 (Korea).

Cassida (Alledoya) vespertina: Kimoto, 1984, Col. Jap. Col. 4: 222, pl. 43(22) (Korea).

Locality: new records- Mt. Taedunsan, Mt. Ungilsan, Mt. Naejangsan.

Distribution: Korea, Japan (Honshu, Shikoku, Ryukyu), China (Chahar, Chekiang, Fukien, Hunan, Hupeh, Kwangtung, Sikang, Szechuan), Mongolia, U.S.S.R. (Siberia).

Host: *Calystegia Soldanella* (L.) R. & S., *Clematis apiifolia* D.C., *C. Chinensis* Rotz.

Subgenus *Taiwania* Spaeth, 1913

7. *Cassida (Taiwania) amurensis* (Kraatz, 1879) 아크리 난쟁이알벌레

Coptocycla amurensis Kraatz, 1879, Deutsch. Ent. Zeitschr. 23: 141.

Cassida (Metriona) amurensis: Chûjô, 1942, Trans. Nat. Hist. Soc. Form. 32: 43 (Korea).

Cassida (Taiwania) amurensis: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 969-970, f. 276 (a) (Korea).

Cassida amurensis: Cho. 1965, Techn. Nat. Sci. Kor. Univ. 6: 128 (Korea).

Cassida amurensis: Cho. 1969, Ill. Encycl. For. & Faun. Kor. 10: 406-407 (Korea).

Cassida (Taiwania) amurensis: Jolivet, 1973, Cah. Pac. 17: 275 (Coree).

Distribution: Korea, China (Kirin), U.S.S.R. (Siberia).

8. *Cassida (Taiwania) juglans* Gressitt, 1942 연노랑난쟁이 알벌레

Cassida juglans Gressitt, 1942, Lingn. N. H. Surv. & Mus. Spec. Publ. 5: 4, f. 4.

Locality: new records- Mt. P'algongsan, Mt. Odaesan.

Distribution: Korea (new record), China (Chekiang).

9. *Cassida (Taiwania) sigillata* (Gorham, 1885)

Coptocycla sigillata Gorham, 1885, Proc. Zool. Soc. Lond.: 284.

Metriona sigillata: Chujo, 1941, Trans. Nat. Hist. Soc. Form. 31(209): 235 ^①.

Metriona sigillata: Cho. 1957, Hum. Sci. Nat. Sci. Kor. Univ. 2: 249 (Korea).

Cassida (Taiwania) sigillata: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 974 (Korea).

Cassida sigillata: Cho. 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 128 (Korea).

Metriona sigillata: Zool. Soc. Kor., 1968, Nom. An. Kor. 2: 120 (Korea).

Cassida sigillata: Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 406-407 (C. Korea).

Cassida (Taiwania) sigillata: Jolivet, 1973, Cah. Pac. 17: 275 (Corée).

Cassida (Taiwania) sigillata: Kimoto, 1984, Col. Jap. Col. 4: 222, pl. 43(21) (Korea).

Locality: publish record- Kôryo^①; new record- Mt. Kûmgangsan.

Distribution: Korea, Japan (Honshu, Kyushu, Shikoku, Tsushima), China (Chekiang, Fukien, Kwangtung, Taiwan).

10. *Cassida (Taiwania) versicolor* (Boheman, 1885) 에스사 남생이 앞벌레*Coptocyclus versicolor* Boheman, 1885, Mon. Cass. 3:414.*Coptocyclus Thais* Boheman, 1862, Ibid. 4: 463.*Coptocyclus crucifera* Kraatz, 1879, Deutsch. Ent. Zeitschr. 23: 271.**Locality:** new records-Mt. Hwanghaksan, Mt. Naejangsan, Mt. Hallasan, Mt. Tur'yunsan.**Distribution:** Korea (new record), Japan (Honshu, Shikoku, Kyushu, Ryukyu), China (Chekiang, Fukien, Hainan, Hunan, Hupeh, Kiangsi, Kwangtung, Taiwan), U.S.S.R. (Siberia), Vietnam (Tonkin), Burma.**Host:** *Malus* sp., *Pourthiaea* sp., *Prunus* sp., *Pyrus serotina* Rehder, *Rhaphiolepis indica*, *Sorbus gracilis* Koch, *S. alnifolia*. Rosaceae spp.Subgenus *Mionycha* Weise, 189111. *Cassida (Mionycha) concha* Solsky, 1872 우수리 남생이 앞벌레*Cassida concha* Solsky, 1872, Hor. Soc. Ent. Ross. 8: 264.*Cassida (Mionycha) concha*: Chujo et Kimoto, 1961, Pac. Ins. 3(1): 199 (Korea).*Cassida (Mionycha) concha*: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 975-976 (Korea).*Cassida concha*: Cho. 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 128 (Korea).*Cassida (Mionycha) concha*: Kimoto, 1966, Journ. Fac. Agr., Kyush. Univ. 13(4): 653 (Korea).*Cassida concha*: Cho. 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 406-407 (Korea).*Cassida (Mionycha) concha*: Jolivet, 1973, Cah. Pac. 17: 275 (Corée).*Cassida (Mionycha) concha*: Kimoto, 1984, Col. Jap. Col. 4: 221 (Korea).**Distribution:** Korea, China (Liaoning), Japan (Honshu), U.S.S.R. (Siberia).Subgenus *Cassida* Linnaeus s. str., 175812. *Cassida (Cassida) fuscorufa* Motschulsky, 1866 적갈색 남생이 앞벌레*Cassida fuscorufa* Motschulsky, 1866, Bull. Soc. Nat. Mosc. 39(1): 178.*Cassida consociata* Baly, 1874, Trans. Ent. Soc. Lond.: 213.*Cassida fuscorufa*: Spaeth, 1926, Best.-Tab. Eur. Col. 95: 36 (Korea).*Cassida fuscorufa*: Chûjô, 1934, Sylvia 5: 177 (Korea).*Cassida fuscorufa*: Chûjô, 1941, Trans. Nat. Hist. Soc. Form. 31(209): 234^{①-③}.*Cassida fuscorufa*: Ishii, 1941, Sci. Rep. Keit. 6: 10^④.*Cassida fuscorufa*: Gressitt, 1952, Proc. Cal. Acad. Sci. 4(27): 507 (Korea).*Cassida fuscorufa*: Cho. 1957, Hum. Sci. Nat. Sci. Kor. Univ. 2: 248 (Korea).*Cassida fuscorufa*: Chûjô et Kimoto, 1961, Pac. Ins. 3(1): 196 (Korea).*Cassida (Cassida) fuscorufa*: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 976 (Korea).*Cassida fuscorufa*: Nakane, 1963, Icon. Ins. Jap. Col. 2: 348, pl. 174(13) (Korea).*Cassida fuscorufa*: Cho, 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 129 (Korea).

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Cassida (Cassida) fuscorufa: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 655 (Korea).

Cassida fuscorufa: Zool. Soc. Kor., 1968, Nom. An. Kor. 2: 120 (Korea).

Cassida fuscorufa: Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 406-407 (N. C. Korea).

Cassida (s. str.) fuscorufa: Jolivet, 1973, Cah. Pac. 17: 275 (Corée).

Cassida fuscorufa: Kim et al. 1975, Rep. Kor. Ass. Cons. Nat. 7: 225 ⑤.

Cassida fuscorufa: Lopatin, 1975, Ins. Mong. 3: 230 (Korean peninsula).

Cassida fuscorufa: Kim, 1978, Distr. Atl. Ins. Kor. 2: 176, pl. 18 (CH41) ⑥-⑩.

Cassida (Cassida) fuscorufa: Takizawa, 1980, Nat. & Lif. 10(2): 12 ②.

Cassida (Cassida) fuscorufa: Kimoto, 1984, Col. Jap. Col. 4: 221, pl. 43 (13) (Korea).

Locality: published records- Husen-Kôgen ①, Yuki ②, Daiheimen ③, Mt. Hwaaksan ④, ⑪, Hwach'ôn ⑤, ⑨, Ch'ongjin ⑥, Mt. Paegamsan ⑦, Kuryongsa ⑧, Kwangnûng ⑩, Seoul Ch'ôngyangni ⑪, Namsan ⑫, Sinch'on ⑬, Susaek ⑭, Okch'olli ⑮, Mt. Kodaesan ⑯, Mt. Wangbangsan ⑰, Mt. Yongmunsan ⑱, Kungok ⑲, Hibangsa ⑳ Palkong-san ㉔; new records- Mt. Hwanghaksan, Mt. Naeyônsan, Taegu, Tansan Myôn, Mt. Pukhansan, Mt. Ungilsan, Mt. Obongsan, Mt. Sôlaksan, Mt. Tôgyusan, Mt. Mudûngsan.

Distribution: Korea, Japan (Hokkaido, Honshu, Kyushu, Shikoku, Tsushima), China (Fukien, Heilungkiang, Hopei, Kiangsi, Kiangsu, Kirin, Liaoning, Taiwan).

Host: *Artemisa* spp.

13. *Cassida (Cassida) lineola* Creutzer, 1799

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Cassida lineola Creutzer, 1799, Ent. Vers.: 119, pl. 2(23).

Cassida russica Herbst, 1799, Nat. Käf. 8: 232, pl. 131(1).

Cassida sibirica Gebler, 1833, Bull. Soc. Nat. Mosc. 6: 306.

Cassida bicostata Fischer, 1842, Cat. Col. Sib. Or. Kar.: 24.

Cassida nigroguttata Gorham, 1885, Proc. Zool. Soc. Lond.: 281.

Cassida nigrostrigata Fairmaire, 1888, Rev. d'Ent. 7: 157.

Cassida lineola; Haku, 1936, Chos. Nat. Hist. Soc. 1(21): 123 ①.

Cassida lineola (sic): Mochizuki et Tsunekawa, 1937, Journ. Chos. Nat. Hist. Soc. 22: 84. ②.

Cassida (Cassida) lineola: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 978-979, f. 283(a) (Korea).

Cassida lineola: Cho, 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 129 (Korea).

Cassida (Cassida) lineola: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 955 (Korea).

Cassida lineola: Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 406-407 (Korea).

Cassida (s. str.) lineola: Jolivet, 1973, Cah. Pac. 17: 275 (Coree).

Cassida (Cassida) lineola: Kimoto, 1984, Col. Jap. Col. 4: 222, pl. 43(18) (Korea).

Locality: published records- Taegu ①, Seoul ②, new records-Mt. Sudosan, Mt. Sôlaksan.

Distribution: Korea, Japan (Honshu), China (Chahar, Fukien, Hopei, Hupeh, Kwangsi, Taiwan), Mongolia, U.S.S.R. (Siberia), Europe.

Host: *Artemisa absinthium*, *A. camperstris*, *Beta vulgaris* L.

14. *Cassida (Cassida) mandli* Spaeth, 1921

민남생이 앞벼레

Cassida (Cassida) Mandli Spaeth, 1921, Kol. Rundsch. 9: 84.*Cassida (Cassida) mandli*: Chûjô, 1942, Trans. Nat. Hist. Soc. Form. 32: 42 (Korea).*Cassida (Cassida) mandli*: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 979, f. 283(b) (Korea).*Cassida mandli*: Cho, 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 129 (Korea).*Cassida mandli*: Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 406-407 (Korea).*Cassida* (s. str.) *mandli*: Jolivet, 1973, Cah. Pac. 17: 275 (Corée).

Locality: new record- Mt. Hwanghaksan.

Distribution: Korea, China (Liaoning), U.S.S.R. (Siberia).

15. *Cassida (Cassida) nebulosa* Linnaeus, 1758

남생이 앞벼레

Cassida nebulosa Linnaeus, 1758, Syst. Nat. ed. 10: 365.*Cassida affinis* + *C. maculata* Fabricius, 1775, Syst. Ent.: 88.*Cassida tigrina* DeGeer, 1775, Mem. Ins. 5: 168, pl. 5 (15,16).*Cassida nigra* Herbst, 1799, Nat. Käf. 8: 258, pl. 131(12).*Cassida nebulosa*: Cho, 1934 Journ. Chos. Nat. Hist. Soc. 17: 80^①.*Cassida nebulosa*: Mochizuki, 1935, Rensei 2(4): 31 (Korea).*Cassida nebulosa*: Chûjô, 1936, Bull. Um. Ent. Lab. 3: 13^②.*Cassida nebulosa*: Haku, 1936, Journ. Chos. Nat. Hist. Soc. 1(21): 123^③.*Cassida nebulosa*: Masaki, 1936, Kontyu 10(5): 262^④.*Cassida nebulosa*: Mochizuki et Tsunekawa, 1937, Chos. Nat. Hist. Soc. 22: 84^⑤.*Cassida nebulosa*: Mochizuki et Masui, 1939, Sci. Rep. Keit. 4: 65^{⑥-⑦}.*Cassida nebulosa*: Ishii, 1940, Ibid. 5: 51^⑧.*Cassida* (s. str.) *nebulosa*: Chûjô, 1941, Trans. Nat. Hist. Soc. Form. 31(209): 234^{⑨-⑪}.*Cassida nebulosa*: Ohane et al., 1941, Sci. Rep. Keit. 6: 26 (Korea).*Cassida nebulosa*: Gressitt, 1952, Proc. Cal. Acad. Sci. 4(27): 513 (Korea).*Cassida nebulosa*: Gotô, 1956, In Nakane, et al.: Color Ill. Ins. Jap. Col.: 68, pl. 20 (Korea).*Cassida nebulosa*: Cho, 1957, Hum. Sci. Nat. Sci. Kor. Univ. 2: 248 (Korea).*Cassida (Cassida) nebulosa*: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 980 (Korea).*Cassida nebulosa*: Cho, 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 129 (Korea).*Cassida nebulosa*: Suda, In Furukawa, et al., 1965, Col. Encycl. Ins.: 551 (Korea).*Cassida (Cassida) nebulosa*: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 653-654 (Korea).*Cassida nebulosa*: Ed. Min., 1967, Rep. Acad. Surv. Mt. Seolak: 195^⑫.*Cassida nebulosa*: Zool. Soc. Kor., 1968, Nom. An. Kor. 2: 120 (Korea).*cassida nebulosa*: Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 390-391, pl. 74(30) (N.C. Korea).*Cassida nebulosa*: Seok, 1970, Ins. Faun. Is. Quelpart 5: 59^⑬.*Cassida* (s. str.) *nebulosa*: Jolivet, 1973, Cah. Pac. 17: 275 (Corée).*Cassida nebulosa*: Kim et al., 1975, Rep. Kor. Ass. Cons. Nat. 7: 225^⑭.*Cassida nebulosa*: Lopatin, 1975, Ins. Mong. 3: 230 (Korean peninsula).*Cassida nebulosa*: Kim, 1978, Distr. Atl. Ins. Kor. 2: 175, pl. 18 (CH40a)^{⑮-⑱}.

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- Cassida (Cassida) nebulosa*: Takizawa, 1980, Nat. & Lif. 10(2): 12 ④ .
Cassida nebulosa: Lee et Kwon, 1981, Rep. Kor. Ass. Cons. Nat. 19: 170 ⑤ .
Cassida (Cassida) nebulosa: Kimoto, 1984, Col. Jap. Col. 4: 221, Pl. 43(12) (Korea).
Cassida nebulosa: Kim et Nam, 1984, Rep. Acad. Surv. Mt. Sōrak.: 333 ① .

Locality: published records- Mt. Kwanboho ① (Kwanbō-Hō ②, Mt. Kwanmobong ③), Hokusammen ②, ④, Taegu ㄱ, ㄴ, ㄷ (Taikyū ③), Is. Kangwhado Tangsangni ④ (Kokwa-To ①, Tangsalli ④), Seoul ⑤, ⑥ (Keizyō ③, Seoul T'aenŭng ②, Suyuri ①, Ch'ongyangni ③, Anamdong ④, Namsan ⑤), Mt. Songnisan ⑦, ⑧, Mt. Soyosan ⑥, ⑦, Mt. Hokukan-Zan ①, Kōkai ④, Mt. Bazi-San ⑥, Tokuson ⑦, Mt. Seolak ③ (Mt. Sōlaksan ④, Mt. Sōrak ①), Yangu ②, ③, Kapsan ②, Wŏnju ③, Suwŏn ③, Pogwangsa ③, Kwangnŭng ②, Inch'ŏn ③, Mt. Pukhansan ③, Tabsimni ②, Tōgŭlli ③, Kwangju kogol ③, Songgwangsa ④, Sŏnamsa ①, Cheju ②, Sŏgwip'o ④, Pujŏn'gowŏn ④, Chejudo ④ (Is. Quelpart ③), Ulreung Is.; new records- Hayang Ŭp, Mt. Hwanghaksan, Mt. Naeyŏnsan, Mt. P'algongsan, Tansan Myŏn, Ch'ilwŏn Myŏn, Mt. Ch'ŏnhwangsang, Is. Namhaedo, Mt. Wŏnhyosan, Tongsong Myŏn.

Distribution: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima), China (Hopei, Hupeh, Kiangsu, Kirin, Lioning, Shantung, Szechuan), U.S.S.R. (Siberia), Europe.

Host: *Amaranthus sacendens* Lois, *A. mangostanus* L., *Atriplex subcordata*, *Beta vulgaris* var. *altissima*, *B. vulgaris* var. *flavescens*, *Chenopodium album* var. *centrorubrum*, *Convolvulus* sp.

16. *Cassida (Cassida) pallidicollis* Boheman, 1856

노랑가슴 납생이 앞벌레

- Cassida pallidicollis* Boheman, 1856, Cat. Col. Ins. Brit. Mus. 9: 138.
Cassida (Mionycha) Morawitzi Jacobson, 1894, Hor. Soc. Ent. Ross. 28: 245.
Cassida pallidicollis: Spaeth, 1914, Zool. -Bot. Ges. Wien Verh. 64 (Sitzb): 130, 139 (Korea).
Cassida pallidicollis: Spaeth, 1926, Best. -Tab. Eu. Col. 95: 32 (Korea).
Cassida pallidicollis: Doi, 1927, Dob. Zassh. 39(466): 335 ① .
Cassida pallidicollis: Matsumura, 1931, 6000 Ill. Ins. Jap.: 226 (Korea).
Cassida (Cassida) pallidicollis: Wu, 1937, Cat. Ins. Sin. 3: 921 (Korea).
Cassida (Cassida) pallidicollis: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 981, f. 283(c) (Korea).
Cassida pallidicollis: Cho, 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 129 (Korea).
Cassida pallidicollis: Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 391, pl. 31 (Korea).
Cassida (s. str.) *pallidicollis*: Jolivet, 1973, Cah. Pac. 17: 275 (Corée).
Cassida (Cassida) pallidicollis: Takizawa, 1980, Nat. & Lif. 10(2): 12 ②, ③

Locality: published records- Seoul ①, Taegu ②, Palkong-san ③; new records- Hayang Ŭp, Tansan Myŏn, Mt. Pukhansan.

Distribution: Korea, China (Anhui, Heilungkiang, Hopei, Kiangsu, Kirin, Shansi), Mongolia, U.S.S.R. (Siberia).

Host: *Chenopodium* sp.

17. *Cassida (Cassida) piperata* Hope, 1842

애납생이 앞벌레

- Cassida piperata* Hope, 1842, Proc. Ent. Soc. Lond. 1: 62.
Cassida labilis Boheman, 1854, Mon. Cass. 2: 402.
Cassida japana Baly, 1874, Trans. Ent. Soc. Lond.: 212.
Cassida rugifera Kraatz, 1879, Deutsch. Ent. Zeitschr. 23: 274.
Cassida biguttulata Kraatz, 1879, Ibid.: 284.
Coptocycla sparsa Gorham, 1885, Proc. Zool. Soc. Lond.: 284.
Cassida (s. str.) *piperata*: Spaeth, 1926, Best. -Tab. Eur. Col. 95: 30 (Korea).
Cassida japonica (sic): Doi, 1927, Dob. Zassh. 39(466): 337 (Korea).
Cassida piperata: Chujo, 1934, Sylvia 5: 174 (Korea).
Cassida (s. str.) *piperata*: Chûjô, 1941, Trans. Nat. Hist. Soc. Form. 31(209): 235^{①-④}.
Cassida piperata + *C. japonica*: Yuasa, 1950, Icon. Ins. Jap. ed. ref. 2: 1210, pl. 3481, 3482 (Korea).
Cassida piperata: Gressitt, 1952, Proc. Cal. Acad. Sci. 4(27): 515 (Korea).
Cassida piperata: Goto, 1956, In Nakane, et al.: Color. Ill. Jap. Col.: 69, pl. 20 (Korea).
Cassida piperata: Cho, 1957, Hum. Sci. Nat. Sci. Kor. Univ. 2: 248-249 (Korea).
Cassida piperata: Chûjô, 1961, Pac. Ins. 3(1): 197 (Korea).
Cassida japana: Cho, 1963, Hum. Sci. Nat. Sci. 6: 210^⑤.
Cassida (*Cassida*) *piperata*: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 981 (Korea).
Cassida piperata: Nakane, 1963, Icon. Ins. Jap. Col. nat. ed. 2: 348, pl. 174(14) (Korea).
Cassida piperata + *C. japana*: Cho, 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 129 (Korea).
Cassida (*Cassida*) *piperata*: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 654-655 (Korea).
Cassida japana: Cult. & Inf. Min., 1968, Rep. Acad. Surv. Mt. Hanlasan: 262^⑥.
Cassida piperata + *C. japana*: Zool. Soc. Kor., 1968, Nom. an. Kor. 2: 120 (Korea).
Cassida piperata + *C. japana*: Cho, 1969, Ill. Encycl. Faun. & Flor. 10: 406-407 (N.C. Korea).
Cassida (s. str.) *piperita* (sic): Jolivet, 1973, Cah. Pac. 17: 275 (Corée).
Cassida piperata: Kim, 1978, Distr. Atl. Ins. Kor. 2: 175, pl. 18 (CH406)^{⑦-⑬}.
Cassida piperata: Yoon et Nam, 1979, Rep. Kor. Ass. Cons Nat. 14: 84^{⑭-⑰}.
Cassida piperata: Kim et Lee, 1980, Ibid. 16: 83^⑱.
Cassida (*Cassida*) *piperata*: Takizawa, 1980, Nat. & Lif. 10(2): 12^{⑲-⑳}.
Cassida piperata (sic): Kim et Chang, 1982, Gen. Rep. Nat. Cond. 1: 147^㉑.
Cassida (*Cassida*) *piperata*: Kimoto, 1984, Col. Jap. Col. 4: 221, pl. 43(14) (Korea).
Cassida piperata: Kim et Nam, 1984, Rep. Acad. Surv. Mt. Sorak: 333^㉒.

Locality: published records- Kôkai^①, Keizyô^{②, ④}, Seidaimongwai^③, Quelpaert Is. (Cheju-jo)^⑤, Mt. Hanlasan^⑥, Seoul Sôdaemun^⑦ (Sinch'on^⑧, Ahyôndong^⑨), Pogwangsa^⑩, Koegoni^⑪, Hibangsa^⑫, Taegu^{⑬, ⑭}, Bijindo Is.^⑮, Hongdo Is.^⑯, Gugdo Is.^⑰, Galdô Is.^⑱, Chilbal-do^⑲, Kumi nr. Taegu^㉑, Paikong-san^㉒, Is. Deogjeog^㉓, Mt. Sorak^㉔; new records- Kamch'ôn Myôn, Mt. Kûmosan, Mt. Naeyônsan, Is. Tokto, Is. Ullungdo, Mt. Pukhansan, Mt. Tobongsan, Is. Yokjido, Mt. Odaesan, Is. Ch'ujado, Jungmun, Is. Hongdo, Is. Hûksando, Is. Wando.

Distribution: Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Ryukyu, Tsushima), China (Fukien, Hopei, Kiangsu, Kwangtung, Liaoning, Shantung, Sikang, Taiwan), U.S.S.R. (Siberia), Indo China, Philippines (Luzon).

Host: *Achyranthes japonica* (Miq.), *Alternanthera sessilis* R. Br., *Amaranthus ascendens* Lois. *A. mangostanus* L., *Atriplex subcordata* Kitagawa, *Beta vulgaris* L., *Celosia argentea* L.,

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Chenopodium album L., *Commelina nudiflora* L., *C. rgenta*.

18. *Cassida (Cassida) rubiginosa* Muller, 1776 청남생이 앞벌레

Cassida rubiginosa Muller, 1776, Zool. Danm. Prodr.: 65.

Cassida rugosopunctata Motschulsky, 1866, Bull. Soc. Nat. Mosc. 39(1): 177.

Cassida rubiginosa var. *rugosopunctata*: Spaeth, 1926, Best. -Tab. Eur. Col. 95: 44 (Korea).

Cassida rubiginosa rugosopunctata: Mochizuki et Tsunekawa, 1937, Journ. Chos. Nat. Hist. Soc. 22: 84^①.

Cassida rubiginosa rugosopunctata: Narita, 1939, Sci. Rep. Kait. 4: 48^②.

Cassida rubiginosa var. *rugosopunctata*: Chujo, 1941, Trans. Nat. Hist. Soc. Form. 31 (209): 235^{③-⑤}.

Cassida rubiginosa var. *rugosopunctata*: Gressitt, 1952, Proc. Cal. Acad. Sci. 4(27): 517 (Korea).

Cassida rubiginosa + *C. rubiginosa rugosopunctata*: Cho, 1957, Hum. Sci. Nat. Sci. Kor. Univ. 2: 249 (Korea).

Cassida (Cassida) rubiginosa: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 982 (Korea).

Cassida rubiginosa: Cho, 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 130 (Korea).

Cassida (Cassida) rubiginosa: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 656 (Palearctic region).

Cassida rubiginosa: Zool. Soc. Kor., 1968, Nom. An. Kor. 2: 120 (Korea).

Cassida rubiginosa: Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 406-407 (C. Korea).

Cassida (s. str.) *rubiginosa*: Jolivet, 1973, Cah. Pac. 17: 275 (Coree).

Locality: published records- Seoul^① (Keizyô^{③,④}), Mt. Soyosan^② (Mt. Syôyô-Zan^⑤); new records- Mt. Sobaeksan, Suwôn, Is. Namhaedo, Mt. Ch'iaksan, Mt. Odaesan, Mt. Sôlaksan, Mt. Taedunsan, Mt. Tôgyusan, Mt. Hallasan, Is. Chindo.

Distribution: Korea, Japan (Hokkaido, Honshu, Shikoku), China (Chekiang, Fukien, Hupeh, Kiangsu), Tibet, U.S.S.R. (Sachalin).

Host: *Carduus* spp., *Cirsium* spp., *Cynara* spp., *Onopordon* spp., *Saussurea Tanakae* F. & S., *Sonchus* spp., *Tanacetum* spp.

19. *Cassida (Cassida) spaethi* Weise, 1900 스페트 남생이 앞벌레

Cassida stigmatica (nec Suffrian): Kraatz, 1879, Deutsch. Ent. Zeitschr. 23: 267.

Cassida spaethi Weise, 1900, Ibid.: 458.

Cassida Kraatzi Weise, 1900, Arch. Nat. 66: 295.

Cassida spaethi: Spaeth, 1914, Col. Cat. 62: 11 (Korea).

Cassida (Cassida) Spaethi: Spaeth, 1926, Best. -Tab. Eur. Col. 95: 46 (Korea).

Cassida spaethi: Doi, 1927, Dob. Zassh. 39(466): 337 (Korea).

Cassida (Cassida) spaethi: Wu, 1937, Cat. Ins. Sin. 3: 922 (Korea).

Cassida spaethi subsp. *mandschukuoensis* Spaeth, 1942, Arb. Morph. Tax. Ent. Berl. -Dahl. 9: 13.

Cassida (Cassida) spaethi: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 982-983 (Korea).

Cassida spethi (sic): Cho, 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 130 (Korea).

Cassida spaethi: Zool. Soc. Kor., 1968, Nom. An. Kor. 2: 120 (Korea).

Cassida spethi (sic): Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 406-407 (Korea).

Cassida (s. str.) *spaethi*: Jolivet, 1973, Cah. Pac. 17: 276 (Corée).

Cassida spaethi: Lopatin, 1975, Ins. Mong. 3: 231 (Korean peninsula).

Distribution: Korea, China (Heilungkiang), Mongolia, U.S.S.R. (Siberia).

Subgenus *Odontionycha* Weise, 1891

20. *Cassida (Odontionycha) viridis* Linnaeus, 1758

박하 남생이 앞벌레

Cassida viridis Linnaeus, 1758, Syst. Nat. ed. 10(1): 362.

Cassida equestris Fabricius, 1787, Mant. Ins. 1: 624.

Cassida viridis: Heyden, 1887, Hor. Soc. Ent. Ross. 21: 263 (Korean peninsula).

Cassida viridis: Haku, 1936, Journ. Chos. Nat. Hist. Soc. 1(21): 123 ^①.

Cassida viridis: Ishii, 1940, Sci. Rep. Keit. 5: 51 ^②.

Cassida erudita: Kim, 1978, Distr. Atl. Ins. Kor. 2: 175 ^③, ^④.

Locality: published records- Taegu ^①, Hwi gi dong ^②, Kwangnŭng ^③, Mt. Sŏlaksan ^④; new record- Mt. Naeyŏnsan.

Distribution: Korea, China (Kirin), U.S.S.R. (Siberia), Europe.

Host: *Circium*, *Galeopsis*, *Lycopus*, *Mentha*, *Salvia*, *Stachys* spp.

Subgenus *Cassidulella* Strand, 1928

21. *Cassida (Cassidulella) nobilis* Linnaeus, 1758

명이주 남생이 앞벌레

Cassida nobilis Linnaeus, 1758, Syst. Nat. ed. 10(1): 363.

Cassida (Cassidula) nobilis: Chujo, 1941, Trans. Nat. Hist. Soc. Form. 31(209): 233 ^①.

Cassida nobilis: Cho, 1957, Hum. Sci. Nat. Sci. Kor. Univ. 2: 249 (Korea).

Cassida (Cassidulella) nobilis: Gressitt et Kimoto, 1963, Pac. Ins. Mon. 1B: 984 (Korea).

Cassida nobilis: Cho, 1965, Sci. Techn. Nat. Sci. Kor. Univ. 6: 130 (Korea).

Cassida (Cassidulella) nobilis: Kimoto, 1966, Journ. Fac. Agr. Kyush. Univ. 13(4): 657 (Palearctic region).

Cassida nobilis: Zool. Soc. Kor., 1968, Nom. An. Kor. 2: 120 (Korea).

Cassida nobilis: Cho, 1969, Ill. Encycl. Faun. & Flor. Kor. 10: 406-407 (S. Korea).

Cassida nobilis: Gu, 1973, Ent. Lab. Seoul Agr. Coll.: 137 (Korea).

Cassida (Cassidulella) nobilis: Jolivet, 1973, Cah. Pac. 17: 27 (Corée).

Locality: published record- Hokusammen ^①; new records- Hayang Ŭp, Taegu.

Distribution: Korea, Japan (Honshu), U.S.S.R. (Siberia), Europe.

Host: *Atriplex* spp., *Beta vulgaris* L., *Chenopodium* spp., *Honkenya peploides* var. *major*, *Oryza sativa* L., *Silene maritima*, *Spergula arvensis* L.

Remarks: This species was collected by authors in rice plants which are Taegu area in the beginning of June.

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22. *Cassida (Cassidulella) velaris* Weise, 1896 꼬마 남생이 일벌레

Cassida velaris Weise, 1896, Deutsch. Ent. Zeitschr.: 28.

Locality: new record- Mt. Wŏnhyosan.

Distribution: Korea (new record), Japan (Honshu), China (Kirin, Tibet, Tsinghai), U.S.S.R. (Siberia).

23. *Cassida (Cassidulella) vittata* Villers, 1789 종남생이 일벌레

Cassida vittata Villers, 1789, Linn. Ent. 1: 93.

Locality: new record- Kwangnung.

Distribution: Korea (new record), Japan (Honshu), U.S.S.R. (Siberia), Europe.

Host: *Arenaria maritima*, *Beta vulgaris*, *Hokenya* sp., *Salicornia* sp., *Spergula* sp., *Urtica* sp.

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